Identification_Information:
  Citation:
    Citation_Information:
      Originator: National Oceanic and Atmospheric Association (NOAA)/National Ocean Service (NOS)/National Centers for Coastal Ocean Science (NCCOS)/Center for Coastal Ocean Science (CCMA)/Biogeography Team
      Publication_Date: 200307
      Title: St. John, USVI Water Quality Monitoring Data (2003 - Present)
      Publication_Information:
        Publication_Place: Silver Spring, MD
        Publisher: NOAA's Ocean Service, National Centers for Coastal Ocean Science (NCCOS)
      Online_Linkage: http://ccma.nos.noaa.gov/ecosystems/coralreef/reef_fish.html
  Description:
    Abstract:
      The intent of this work is three fold: (1) to spatially characterize and monitor the distribution, abundance, and size of both reef fishes and mega-invertebrates (conch, lobster, Diadema); (2) to relate this information to in-situ data collected on water quality and associated habitat parameters; (3) to use this information to establish the knowledge base necessary for enacting management decisions in a spatial setting and to establish the efficacy of those management decisions. Toward this end, the Center for Coastal Monitoring and Assessment's Biogeography Team (BT) has completed its fourth year and is beginning its fifth year of work in the US Virgin Islands and Puerto Rico. It is critical, with recent changes in management at both locations (e.g. implementation of MPAs) as well as proposed changes (e.g. zoning to manage multiple human uses) that action is taken now to accurately describe and characterize the fish/macro-invertebrate populations in these areas. It is also important that BT work closely with the individuals responsible for recommending and implementing these management strategies. Recognizing this, BT has been collaborating with partners at the University of Puerto Rico, National Park Service, US Geological Survey and the Virgin Islands Department of Planning and Natural Resources.

      To quantify patterns of spatial distribution and make meaningful interpretations, we must first have knowledge of the underlying variables determining species distribution. The basis for this work therefore, is the nearshore benthic habitats maps (<100 ft depth) created by NOAA's Biogeography Program in 2001 and NOS' bathymetry models. Using ArcView GIS software, the digitized habitat maps are stratified to select sampling stations. Sites are randomly selected within these strata to ensure coverage of the entire study region and not just a particular reef or seagrass area. At each site, fish, macro-invertebrates, and associated water quality and habitat information is then quantified following standardized protocols. By relating the data collected in the field back to the habitat maps and bathymetric models, BT is able to model and map species level and community level information. These protocols are standardized throughout the US Caribbean to enable quantification and comparison of reef fish abundance and distribution trends between locations. Armed with the knowledge of where "hot spots" of species richness and diversity are likely to occur in the seascape, the BT is in a unique position to answer questions about the efficacy of marine zoning strategies (e.g. placement of no fishing, anchoring, or snorkeling locations), and what locations are most suitable for establishing MPAs. Knowledge of the current status of fish/macro-invertebrate communities coupled with longer term monitoring will enable evaluation of management efficacy, thus it is essential to future management actions.

Purpose: 1) To spatially characterize and monitor the distribution, abundance, and size of both reef fishes and macro-invertebrates (conch, lobster, Diadema); 2) To relate this information to in-situ data collected on water quality and associated habitat parameters; 3) To use this information to establish the knowledge base necessary for enacting management decisions in a spatial setting; 4) To establish the efficacy of those management decisions; and 5) To work with the National Coral Reef Monitoring Program to develop data collection standards and easily implemented methodologies for transference to other agencies and to work toward standardizing data collection throughout the US states and territories.

Supplemental_Information: This work is being conducted in collaboration with the University of Puerto Rico, National Park Service, US Geological Survey, and the Virgin Islands Department of Planning and Natural Resources.

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 200307

Ending_Date: Present

Currentness_Reference: Ground Condition

Status:

Progress: In Work

Maintenance_and_Update_Frequency: once per year

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -64.84

East_Bounding_Coordinate: -64.66

North_Bounding_Coordinate: 18.38

South_Bounding_Coordinate: 18.23

Keywords:

Theme:

Theme_Keyword_Thesaurus: CoRIS Discovery Thesaurus Version 1.0

Theme_Keyword: Numeric Data Sets > Oceanographic

Theme:

Theme_Keyword_Thesaurus: CoRIS Theme Thesaurus Version 1.0

Theme_Keyword: EARTH SCIENCE > Biosphere > Vegetation > Pigments > Photosynthetic pigments

Theme_Keyword: EARTH SCIENCE > Oceans > Salinity/Density > Salinity

Theme_Keyword: EARTH SCIENCE > Oceans > Ocean Temperature > Water Temperature

Theme_Keyword: EARTH SCIENCE > Oceans > Ocean Optics > Turbidity

Theme_Keyword:

EARTH SCIENCE > Biosphere > Zoology > Corals > Reef monitoring and assessment >

Monitoring and assessment

Theme_Keyword:

EARTH SCIENCE > Biosphere > Zoology > Corals > Reef monitoring and assessment >

In situ physical

Theme:

Theme_Keyword_Thesaurus: ISO 19115 Topic Category

Theme_Keyword: water quality

Theme_Keyword: environment

Theme_Keyword: oceans

Theme:

Theme_Keyword_Thesaurus: None

Theme_Keyword: Hydrolab

Place:
Place_Keyword_Thesaurus: CoRIS place thesaurus Version 1.1
Place_Keyword: COUNTRY/TERRITORY > United States of America > US Virgin Islands > St. John > St. John (18N064W0011)
Place_Keyword: OCEAN BASIN > Atlantic Ocean > Caribbean Sea > Virgin Islands > Virgin Islands > St. John > (18N064W0011)
Access_Constraints: None
Use_Constraints: Please reference NOAA/NCCOS/CCMA/Biogeography Team when utilizing this data in a report or peer reviewed publication. Additionally, knowledge of how this dataset has been of use and which organizations are utilizing it is of great benefit for ensuring this information continues to meet the needs of the management and research communities. Therefore, it is requested but not mandatory, that any user of this data supply this information to the Program Manager: Chris Caldow (email: chris.caldow@noaa.gov).
Point_of_Contact:
Contact_Information:
Contact_Organization_Primary:
Contact_Organization: NOAA/NCCOS/CCMA/Biogeography Team
Contact_Position: Tropical Ecosystem Monitoring and Assessment Project Manager
Contact_Address:
Address_Type: Mailing and Physical Address
Address: 1305 East-West Hwy. (SSMC4, N/SCI-1)
City: Silver Spring
State_or_Province: MD
Postal_Code: 20910
Country: USA
Contact_Voice_Telephone: 301-713-3028
Contact_Electronic_Mail_Address: chris.caldow@noaa.gov
Hours_of_Service: 9:00 - 5:00
Data_Set_Credit: This is a cooperative effort between NOAA's Biogeography Team, the National Park Service, and the Virgin Islands Department of Planning and Natural Resources
Data_Quality_Information:
Logical_Consistency_Report: Not applicable
Completeness_Report: This data consists of multiple water quality measurements across all nearshore marine habitats around St. John, US Virgin Islands. Sites were randomly selected and stratified by habitat types using NOAA's benthic habitat maps of USVI.
Lineage:
Process_Step:
Process_Description:
Site selection begins by stratifying NOAA's nearshore benthic habitat maps into predetermined habitat strata. Utilizing ArcGIS, sites are then randomly selected within strata throughout the region. Using a handheld GPS unit, the boat captain navigates to previously selected sites. A weighted buoy is dropped to mark any site where "live boating" is necessary.
Prior to diver deployment, in-situ water quality measurements are taken. Using the Hydrolab Datasonde 4a, measurements are taken at the surface and as close to the bottom as possible. Water quality parameters include: depth (m), temperature (C), conductivity (mS/cm), turbidity (NTU), and chlorophyll a (mg/l).

Data caveats: Bottom water quality measurements may not indicate actual depth for a site. The cord for the hydrolab is only 25 m, thus water quality measurements for deep sites reflect measurements "near the bottom". Also,

measurements may not be complete due to sensor malfunction or cable connection problems.
      Process_Date: 200107 - Present
Spatial_Reference_Information:
  Horizontal_Coordinate_System_Definition:
    Geographic:
      Latitude_Resolution: 5 decimal places
      Longitude_Resolution: 5 decimal places
      Geographic_Coordinate_Units: Decimal degrees
Entity_and_Attribute_Information:
  Overview_Description:
    Entity_and_Attribute_Overview: We supply all water quality measurements taken. For specific information please see the data dictionary available on the database website.
    Entity_and_Attribute_Detail_Citation: NOAA/NCCOS/CCMA/Biogeography Team
Distribution_Information:
  Distributor:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: NOAA/NCCOS/CCMA/Biogeography Team
      Contact_Position: Tropical Ecosystem Monitoring and Assessment Database Manager
      Contact_Address:
        Address_Type: Mailing and Physical Address
        Address: 1305 East-West Hwy. (SSMC4, N/SCI-1)
        City: Silver Spring
        State_or_Province: MD
        Postal_Code: 20910
        Country: USA
      Contact_Voice_Telephone: 301-713-3028
      Contact_Electronic_Mail_Address: tom.mcgrath@noaa.gov
      Hours_of_Service: 9:00 - 5:00
  Resource_Description: Downloadable data
  Distribution_Liability: These data were prepared by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, make any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference therein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. Any views and opinions expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof. Although all data have been used by NOAA, no warranty, expressed or implied, is made by NOAA as to the accuracy of the data and/or related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by NOAA in the use of these data or related materials.
  Standard_Order_Process:
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        Online_Option:
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              Network_Resource_Name:
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              Network_Resource_Name:
http://www8.nos.noaa.gov/bpdm_web/staff_login.aspx
    Fees: None
    Ordering_Instructions: Please contact Chris Caldow (chris.caldow@noaa.gov)
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  Metadata_Contact:
    Contact_Information:
      Contact_Organization_Primary:
        Contact_Organization: NOAA/NCCOS/CCMA/Biogeography Team
      Contact_Position: Tropical Ecosystem Monitoring and Assessment Project
Manager
      Contact_Address:
        Address_Type: Mailing and Physical Address
        Address: 1305 East-West Hwy. (SSMC4, N/SCI-1)
        City: Silver Spring
        State_or_Province: MD
        Postal_Code: 20910
        Country: USA
      Contact_Voice_Telephone: 301-713-3028
      Contact_Electronic_Mail_Address: chris.caldow@noaa.gov
      Hours_of_Service: 9:00 - 5:00
  Metadata_Standard_Name: Content Standard for Digital Geospatial Metadata
  Metadata_Standard_Version: FGDC-STD-001-1998
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